Assume there is a 30% chance that Falling Apple's EBIT will equal \$15 million per year, a 45% chance that Falling Apple's EBIT will equal \$25 million per year, and a 25% chance that Falling Apple's EBIT will equal \$40 million per year.

- a. What is Falling Apple's optimal level of interest payments if capital markets are perfect? Note: No need to justify your answer.
- b. How will Falling Apple's optimal level of interest payments change (compared to a) if the corporate tax rate equals 30%?
- c. How will Falling Apple's optimal level of interest payments change (compared to b) if the corporate tax rate equals 30%, the personal tax rate on equity income is 10%, and the personal tax rate on ordinary income is 40%? <u>Justify your answer.</u>
- d. How will Falling Apple's optimal level of interest payments change (compared to c) if there are direct and indirect costs associated with financial distress. No need to justify your answer.